



# Pertussis Vaccines Work Group

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**ACIP Pertussis Vaccine Work Group**

Advisory Committee for Immunization Practices

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# ACIP Pertussis Work Group Members

(July 2016)

## ACIP Members

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Laura Riley

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## Liaison Representatives

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## Invited Consultants

William Atkinson

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Lance Chilton<sup>¶</sup>

Mary Healy

Paul Offit

## CDC Lead

Jennifer Liang

\*Former ACIP WG Chair 2009--2013

<sup>¶</sup> Former ACIP member during deliberations

# Terms of Reference

- **Review existing statements on infants and young children (1997), adolescent (2006), adults (2006), and pregnant and postpartum women and their infants (2008) and consolidate into a single statement.**
- Review new data on Tdap including
  - Effectiveness of ACIP recommendations
  - Interval between Td booster and Tdap
  - Use of Tdap in adults aged 65 yrs and older
  - Pregnant and breastfeeding women
    - Use of Tdap
    - Cocooning strategies
  - Vaccinated HCP and need for postexposure prophylaxis
  - Tdap revaccination
    - General population
    - Pregnant women
    - Healthcare personnel
    - “Cocooning”
- Review updated epidemiology of tetanus and diphtheria in the United States

# Pertussis, tetanus and diphtheria vaccines

- DTaP
  - Diphtheria and tetanus toxoids and acellular pertussis
  - Pediatric vaccine
- Tdap
  - Tetanus toxoid, reduced diphtheria toxoid and acellular pertussis
    - Same as DTaP but reduced quantities
  - Adolescent/Adult vaccine
  - Licensed for single use only

# Today's session

1. Guidance on the use of Tdap in pregnant women
2. Updated ACIP statement for pertussis, tetanus and diphtheria (VOTE)

# Preventing infant pertussis by vaccinating women with Tdap during pregnancy

## 2011

- ACIP recommended a single dose of Tdap for pregnant women\*

## 2012

- ACIP expanded the recommendation to a dose of Tdap during *every* pregnancy\*

\*Use of Tdap in pregnant women is an off-label recommendation.

# Tdap coverage among pregnant women, United States

- Michigan Medicaid
  - 14.3% (2011-2013)
- Wisconsin, insured women
  - 35.0% (2013-2014)
- Vaccine Safety Datalink sites; 7 health systems
  - 41.7% (2013)
- Internet Panel Survey of pregnant women, during flu season
  - 48.8% (2015-2016 flu season)

Housey M et al. Vaccination with tetanus, diphtheria, and acellular pertussis vaccine of pregnant women enrolled in Medicaid—Michigan, 2011-2013. *MMWR* 2014;63(38):839-42.

Koepke R. Pertussis and Influenza Vaccination Among Insured Pregnant Women — Wisconsin, 2013–2014. *MMWR* 64(27):746-750.

Kharbanda EO, et al. Maternal Tdap vaccination: Coverage and acute safety outcomes in the vaccine safety datalink, 2007-2013. *Vaccine*. 2016 Feb 10;34(7):968-73.

CDC. Internet Panel Survey. Women aged 18–49 years pregnant at any time since August of prior year (e.g. 2015 for the April 2016 survey).

# Historical background of ACIP statements for pertussis, diphtheria and tetanus vaccines (1)

## 1991\*

- First DTaP licensed by FDA and recommended by ACIP in place of DTP for 4<sup>th</sup> and 5<sup>th</sup> doses among children aged  $\geq 15$  months

## 1997<sup>¶</sup>

- ACIP recommended DTaP vaccines for all 5 doses in childhood vaccination schedule

## 2005<sup>‡</sup>

- Tdap licensed by FDA and recommended by ACIP for a single dose for adolescents (aged 11–18 yrs) and adults (aged 19–64 yrs)

\*CDC. MMWR 1992; 41(No. RR-1):1-10.

<sup>¶</sup> CDC. MMWR 1997; 46(No. RR-7):1-25.

<sup>‡</sup> CDC. MMWR 2006;55(No. RR-3) [adolescent]; CDC. MMWR 2006;55(No. RR-17) [adult]

# Historical background of ACIP statements for pertussis, diphtheria and tetanus vaccines (2)

## 2010\*

- Tdap should be administered regardless of interval since last tetanus- or diphtheria-toxoid containing vaccine
- Permissive Tdap recommendation for adults aged 65 years or older
- Catch-up schedule for children aged 7 through 10 years: receive a single dose of Tdap

## 2011<sup>¶</sup>

- A dose of Tdap during pregnancy for women who previously have not received Tdap

## 2012<sup>±, §</sup>

- Routinely recommend a dose of Tdap for adults aged 65 and older
- A dose of Tdap during every pregnancy

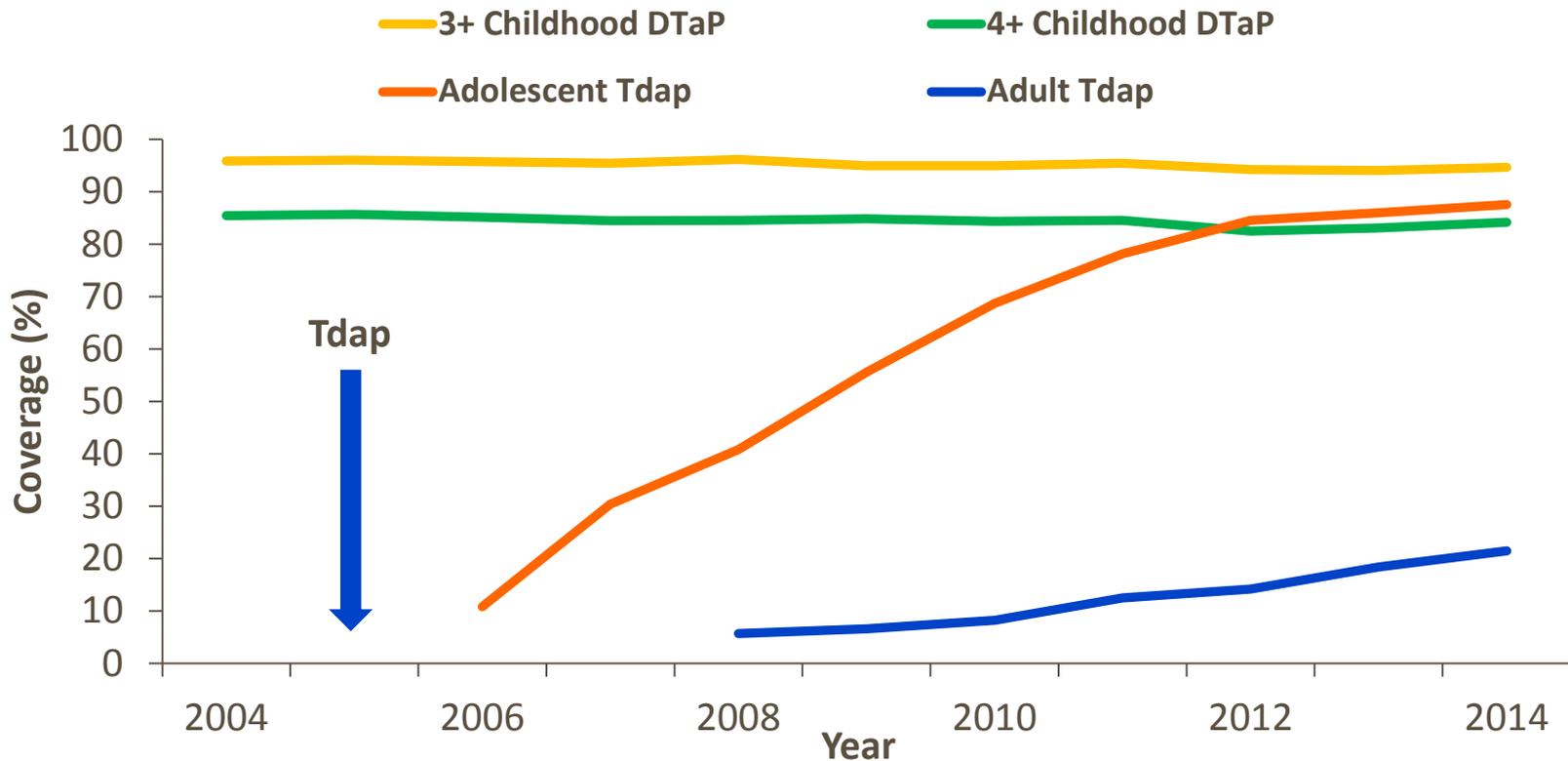
\*CDC. MMWR 2011;60:13–5.

<sup>¶</sup>CDC. MMWR 2011;60:1424–6.

<sup>±</sup>CDC. MMWR 2012;61:468-470.

<sup>§</sup>CDC. MMWR 2013;62:131-135.

# Childhood DTaP Coverage and Tdap Coverage Among Adolescents and Adults



\*CDC National Immunization Survey: DTaP among children aged 19 through 35 months, Tdap coverage among adolescents aged 13 through 17 years. Coverage among adults aged 19 through 64 years from National Health Information Survey.

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